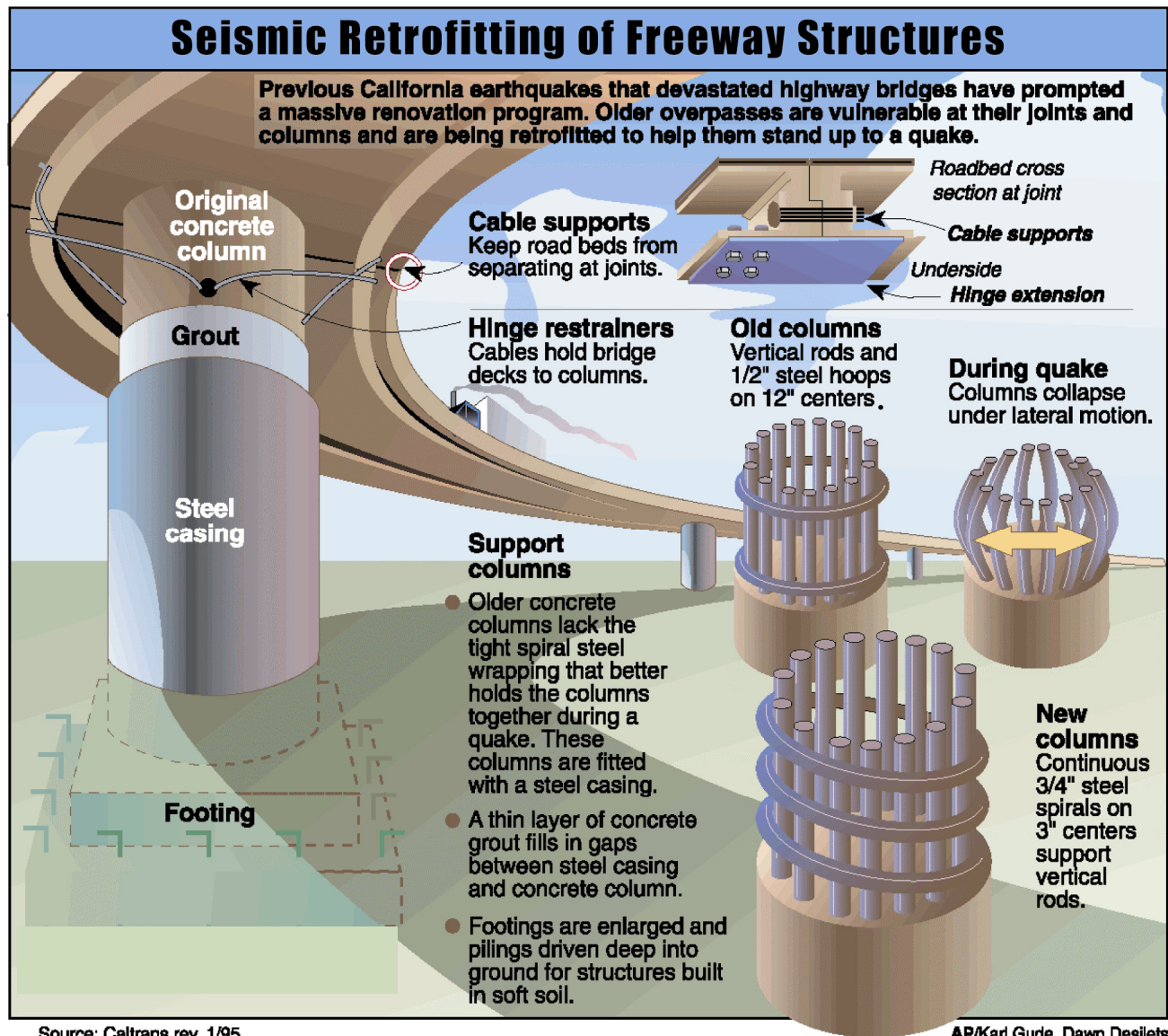


CALIFORNIA DEPARTMENT OF TRANSPORTATION

FIRST QUARTER 2009 NON-TOLL SEISMIC RETROFIT PROGRAM QUARTERLY REPORT



Source: Caltrans rev. 1/95

AP/Karl Gude, Dawn Desilets

Reporting Period Ending March 31, 2009

Report Overview

This report provides information on the status and progress in delivering the California Department of Transportation's (Department) non-toll seismic retrofit programs. Other seismic retrofit programs under development by the Department included the following:

- The Phase 1 Seismic Retrofit Program is complete and is no longer reported.
- The Toll Bridge Seismic Retrofit Program Report is prepared and submitted separately by the Toll Bridge Program Oversight Committee as outlined in Section 30952.2 (b) (1) of the Streets and Highways Code.

This report fulfills the Department's statutory reporting requirement outlined in Assembly Bill (AB) 144 (Chapter 71, Statutes of 2005), which amended Section 188.5 (g) of the Streets and Highways Code as follows:

“(1) Commencing on January 1, 2004, and quarterly thereafter until completion of all applicable projects, the Department shall provide quarterly seismic reports to the transportation committees of both houses of the Legislature and to the commission for other seismic retrofit programs.

- (2) The reports shall include all of the following:
- (A) A progress report for each program.
 - (B) The program baseline budget for support and capital outlay construction costs.
 - (C) The current or projected program budget for support and capital outlay construction costs.
 - (D) Expenditures to date for support and capital outlay construction costs.

(E) A comparison of the current or projected schedule and the baseline schedule.

(F) A summary of milestones achieved during the quarterly period and any issues identified and actions taken to address those issues.”

The Department currently has two active non-toll seismic retrofit programs as outlined below.

Phase 2 Seismic Retrofit Program:

The program consists of additional (beyond Phase 1) State-owned bridges that were determined to need seismic retrofit based on additional screening.

Local Bridge Seismic Retrofit Program:

The program consists of seismic retrofit of locally owned and Department of Water (DWR) bridges. This program is funded and implemented by the agencies having jurisdiction over the bridges.

Background

California has more than 12,000 State-owned bridges on its State Highway System, plus an additional 11,500 city and county-owned bridges not on the State Highway System. Each bridge is inspected at least once every two years.

After the 1994 Northridge earthquake, the Department identified 1,155 State-owned bridges that became the Phase 2 program consisting of

mostly multicolumn bridges. Funding for this \$1.35 billion program came from a \$2 billion Proposition 192 bond, which was passed in 1996.

Seismic Evaluation

The Seismic Retrofit Program involves strengthening the columns of existing bridges by encircling certain columns with a steel casing or, in a few instances, an advanced woven fiber casing. In addition to the column casing, some bridge footings are made bigger and given more support by placing additional pilings in the ground, or by using steel tie-down rods to better anchor the footings to the ground.

In a few projects, bridge abutments are made larger and the existing restrainer units are made stronger, because encasing the columns makes them stiffer and can change the way forces are transmitted within the bridge. Many seismic retrofits involve “hinge seat extensions” which enlarge the size of the hinges that connect sections of bridge decks and help prevent them from separating during severe ground movement. The design of each bridge to be retrofitted is “site specific” based on the maximum credible earth movement expected at that location. The design details depend on many factors, including the nearest active earthquake fault, type of geology beneath the bridge, and the original bridge design.

Phase 2 Seismic Retrofit Program

Progress Report

The Phase 2 Seismic Retrofit Program is 99 percent complete. To date 1,150 State-owned bridges, of 1,155 planned bridges, have been retrofitted under the Phase 2 program. Of the remaining five bridges, two are under construction, two (one contract) are in the bidding phase, and one bridge is in design.

Milestones Achieved This Quarter

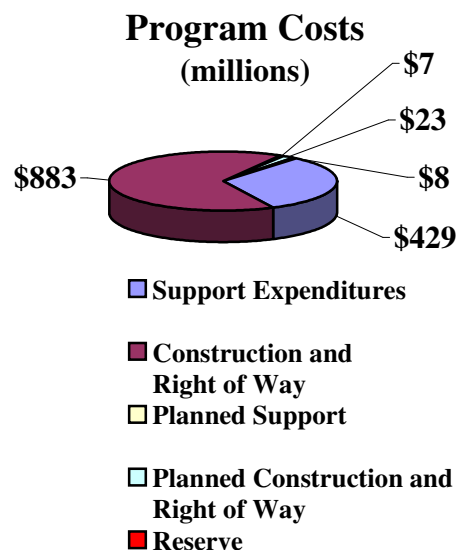
The 5th Avenue project in Alameda County on Interstate 880 was awarded on March 25, 2009.

Program Budget and Expenditures

The total budget for Phase 2 is \$1.35 billion. A total of \$883 million has been allocated for construction and right-of-way, and an additional \$429 million has been expended for support. The total of \$1.312 billion committed to date uses approximately 97 percent of the available program funds.

Of the remaining \$38 million, \$23 million is to be allocated for construction and right-of-way, and \$7 million is planned for support, leaving a reserve of \$8 million. This reserve is intended to cover cost changes, higher-than- anticipated bid results, any potential supplemental funds that may be needed, and arbitration settlements.

No program cost overruns are anticipated. All remaining funds will be used to complete the Phase 2 program.



Program Funds

Funding for the Phase 2 Seismic Retrofit Program comes from three sources. Proposition 192, which the voters approved in March of 1996, provides bonds for \$1.21 billion. As shown in the table below, an additional \$140 million was expended from a combination of State (\$99.8 million) and federal (\$40.2 million) funds prior to the passage of Proposition 192. The total budget for Phase 2 is \$1.35 billion.

Seismic Retrofit Funds

Funds	Budgeted \$ (millions)	Allocated \$ (millions)
State	\$99.8	\$99.8
Federal	\$40.2	\$40.2
Bond	\$1,210.0	\$1,172.0
Total	\$1,350.0	\$1,312.0
Available		\$38.0

As bridges were evaluated for seismic retrofit design strategies, it was determined that for some bridges it would be more cost effective to replace the bridge than to retrofit. This is particularly true when the existing bridge needed nonseismic improvements for bridge repair or rehabilitation.

The additional cost for replacement is beyond the scope of funds available for the retrofit program. Consequently, bridge replacement costs were programmed in the State Highway Operation and Protection Program (SHOPP).

Additional Bridge Replacement Funds

Funded from SHOPP

Replacement Bridges	Program Year	Const \$ (million)	R/W \$ (million)
Ten Mile	2005-06	\$ 20.2	\$ 0.2
5 th Avenue Overhead	2006-07	\$ 153.8	19.8
High Street Separation	2008-09	\$ 100.2	\$ 20.1
Projects Allocated from SHOPP - \$314.3 million			
Schuyler Heim	2009-10	\$ 270.0	\$ 5.0
Projects Programmed in SHOPP - \$275.0 million			

Program Delivery by Region/District

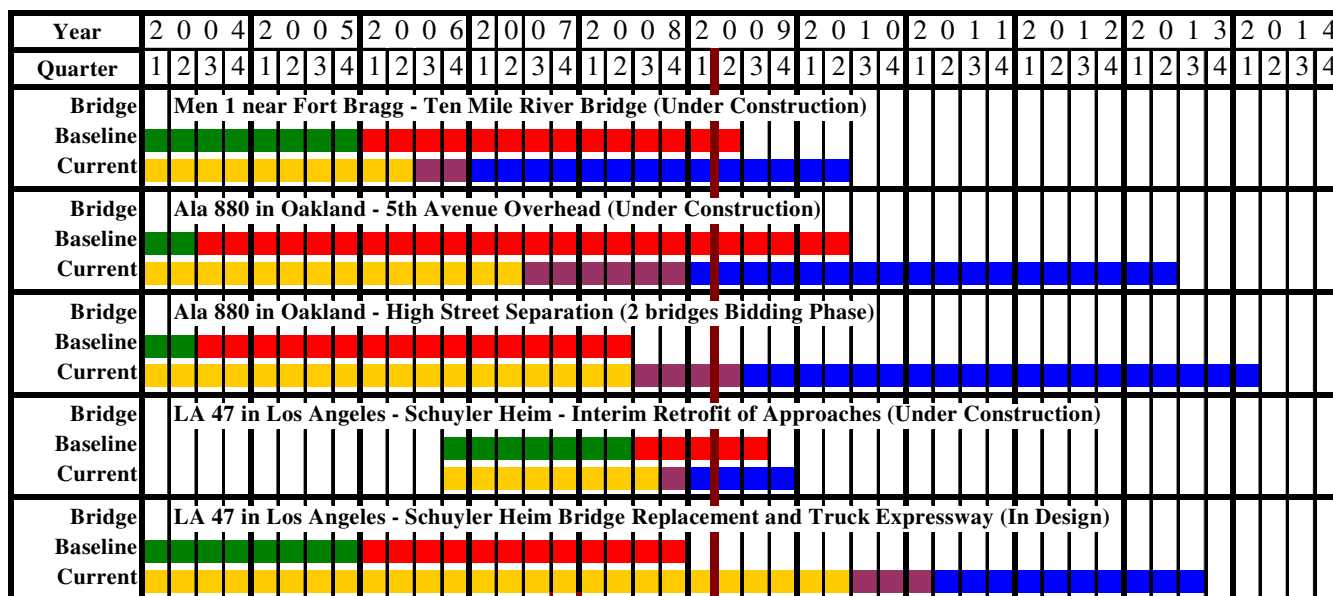
Bridges By Region	#	Percent of Total	\$ (million)	Percent of Total
North Coast	81	7	\$ 154	11
Bay Area	151	13	\$ 527	39
Central Valley	267	23	\$ 184	14
Southern California	656	57	\$ 485	36
Total	1,155	100	\$ 1,350	100

Bridges By District Office	#	Percent of Total	\$ (million)	Percent of Total
1 (Eureka)	69	6	\$ 139	11
2 (Redding)	12	1	\$ 15	1
3 (Marysville)	36	3	\$ 40	3
4 (Oakland)	151	13	\$ 527	39
5 (San Luis Obispo)	107	9	\$ 82	6
6 (Fresno)	77	7	\$ 18	1
7 (Los Angeles)	292	25	\$ 301	22
8 (San Bernardino)	131	11	\$ 86	6
9 (Bishop)	7	1	\$ 2	1
10 (Stockton)	40	4	\$ 42	3
11 (San Diego)	172	15	\$ 82	6
12 (Irvine)	61	6	\$ 16	1
Total	1,155	100	\$ 1,350	100

Comparison of Current and Baseline Schedule

While the program is 99 percent complete, the few remaining bridges (1 percent) are taking substantially longer than originally planned, because they are total bridge replacement projects. The bridge replacement contracts face delivery

challenges, including environmental constraints, construction under heavy traffic conditions, and securing public and external agency input and acceptance for project approval.



Legend



Indicates Current Reporting Quarter

Baseline date is planned schedule as of November 2001 (AB1171 approved)

Projects Under Construction or in Bidding Phase

Ten Mile River Bridge

In Mendocino County on State Route 1 North of Fort Bragg and South of Westport.

Retrofit Strategy: Replace Bridge.

	End Design	End Constr	Budget (millions)
Baseline Schedule	Late 05	Early 09	
Current Schedule	Late 06	Mid 10	
Funding:	SHOPP	Seismic	Total
Construction	\$20.2	\$32.7	\$52.9
Right-of-Way	\$ 0.2	\$ 0.0	\$ 0.2
Support	\$10.0	\$10.0	\$20.0
Mitigation	\$ 2.0	\$ 4.2	\$ 6.2
Total	\$32.4	\$46.9	\$79.3

Number of Bridges to be Retrofitted – 1
10-0161 Ten Mile River Bridge



The construction contract is 89 percent complete. A groundbreaking ceremony is being planned for May 8, 2009.

Fifth Avenue Overhead

In Alameda County on Interstate 880 in Oakland.

Retrofit Strategy: Replace Bridge.

	End Design	End Constr	Budget (millions)
Baseline Schedule	Mid 04	Early 10	
Current Schedule	Mid 07	Mid 13	
Funding:	SHOPP	Seismic	Total
Construction	\$153.8	\$ 0.0	\$153.8
Right-of-Way	\$ 19.8	\$17.2	\$ 37.0
Mitigation	\$ 0.0	\$17.0	\$ 17.0
Support	\$ 15.3	\$ 7.0	\$ 22.3
Total	\$188.9	\$41.2	\$230.1

Number of Bridges to be Retrofitted – 1
33 0027 5th Avenue Overhead



Bids were opened on February 4, 2009. The low bid was 25 percent below the engineer's estimate. The contract was subsequently awarded to the low bidder on March 25, 2009.

High Street Separation

In Alameda County on Interstate 880 in Oakland.

Retrofit Strategy: Replace Bridges.

	End Design	End Constr	Budget (millions)
Baseline Schedule	Mid 04	Mid 08	
Current Schedule	Mid 08	Early 14	
Funding:	SHOPP	Seismic	Total
Construction	\$73.2	\$ 0.0	\$73.2
Right-of-Way	\$20.1	\$22.0	\$42.1
Support	\$32.4	\$17.0	\$49.4
Total	\$125.7	\$39.0	\$164.7

Number of Bridges to be Retrofitted – 2

33 0040L High Street Separation Overhead

33 0040R High Street Separation Overhead

Substantial progress has been made in the acquisition of right-of-way parcels needed for the project. The biggest obstacle to starting construction is time needed to relocate utilities and realign a city street that is part of the conditions in acquiring right-of-way parcels. Acquiring these parcels is required for the utility relocation and city street realignment that is needed before starting bridge construction.

Schuyler Heim Bridge Interim Retrofit

In Los Angeles County on State Route 47 in Long Beach.

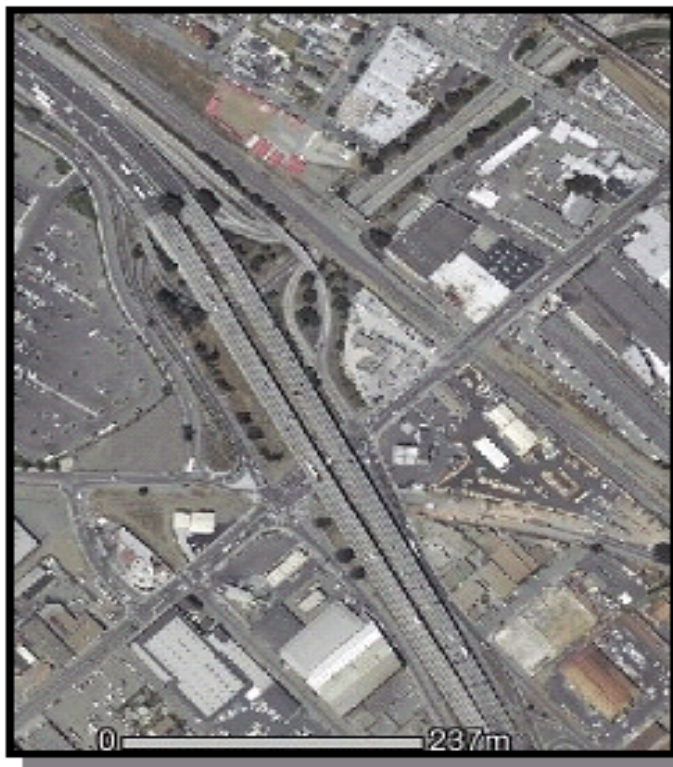
Retrofit Strategy: Reinforce bridge approaches.

	End Design	End Constr	Budget (millions)
Baseline Schedule	Late 08	Late 09	
Current Schedule	Mid 08	Late 09	
Funding:			Total
Construction			\$3.7
Right-of-Way			\$0.3
Support			\$2.0
Total			\$6.0

Number of Bridges to be Retrofitted – 0 – Interim Measure

53 2618 Schuyler Heim Bridge

The project met the ready to list milestone on June 30, 2008. Funds were allocated in December 2008, and construction is planned to begin summer 2009.



The Department initiated an interim retrofit project to enhance safety of the approach slabs to the bridge. This will provide an increased level of safety on an interim basis while the bridge replacement project is implemented.

The interim retrofit construction contract is 32 percent complete.

Projects in Design

Schuyler Heim Bridge Replacement and Truck Expressway

In Los Angeles County on State Route 47 in Long Beach.

Retrofit Strategy: Replace Bridge.

Project includes elevated truck expressway to bypass at grade intersections.

	End Design	End Constr	Budget (millions)
Baseline Schedule	Late 05	Late 08	
Current Schedule	Mid 10	Late 13	

Funding:

Other	TCIF	SHOPP	Seismic	Total
Construction				
\$125.0	\$158.0	\$270.0	\$0.0	\$553.0
Right-of-Way				
\$ 81.0	\$ 0.0	\$ 5.0	\$0.0	\$ 86.0
Support*				
\$ 18.9	\$ 0.0	\$ 25.1	\$4.0	\$ 48.0
Totals				
\$224.9	\$158.0	\$300.1	\$4.0	\$687.0

* Support costs for construction and right-of-way not identified in TCIF application.

Number of Bridges to be Retrofitted – 1
53 2618 Schuyler Heim Bridge

A decision was made based on the initial public hearing comments to prepare a Health Risk Assessment study. Another public hearing was conducted on January 15, 2009. The environmental document is being reviewed and finalized for project approval.

A substantial amount of risk is involved in delivering this project. Project risks are outlined below:

- Environmental issues (noise, air quality, and traffic impacts).
- Property impacts to pier operations.
- Possible opposition to the project from residents.
- Time to address construction issues and complications due to maintaining and reconstructing, as needed, numerous utilities, railroad operations, and pier and port operations.
- Hazardous waste studies and remedial action.

The Alameda Corridor Transportation Authority (ACTA) is the lead agency in preparation of the environmental document and has been evaluating an elevated Truck Corridor Expressway to tie into a replacement bridge.

A final environmental document for the combined project was completed by ACTA, and the initial public hearing was held on September 25, 2007.



Seismic Retrofit Program Budget, Expenditures and Current Estimates (Phase 2 Funds Only)

Bridges	Projects	Baseline Budget*	Current Budget*	Expenditures To Date*
1,150	Completed Projects			
	Capital Outlay Support		\$ 395.0	\$ 393.1
	Capital Outlay	\$ 840.0	\$ 808.9	\$ 798.7
	Total		\$ 1,203.9	\$ 1,191.8
	Projects In Bidding Phase or In Construction			
1	5th Avenue Overhead			
	Capital Outlay Support		\$ 7.0	\$ 7.0
	Capital Outlay (R/W Only)	\$ 0.0	\$ 17.2	\$ 17.2
	Mitigation measures		\$ 17.0	\$ 0.0
	Total		\$ 41.2	\$ 24.2
2	High Street Separations			
	Capital Outlay Support		\$ 17.0	\$ 16.6
	Capital Outlay (R/W Only)	\$ 0.0	\$ 22.0	\$ 11.3
	Total		\$ 39.0	\$ 27.9
1	Ten Mile River Bridge			
	Capital Outlay Support		\$ 10.0	\$ 8.3
	Capital Outlay	\$ 25.0	\$ 32.7	\$ 26.1
	Mitigation Projects		\$ 4.2	\$ 0.0
	Total		\$ 46.9	\$ 34.4
Interim	Schuyler Heim Interim Retrofit Approaches			
	Capital Outlay Support		\$ 2.0	\$ 0.1
	Capital Outlay	\$ 0.0	\$ 4.0	\$ 0.0
	Total		\$ 6.0	\$ 0.1
	Projects in Design			
1	Schuyler Heim Bridge replacement			
	Capital Outlay Support		\$ 4.0	\$ 4.0
	Capital Outlay	\$ 66.0	\$ 0.0	\$ 0.0
	Total		\$ 4.0	\$ 4.0
1,155	Program Totals			
	Capital Outlay Support	\$ 419.0	\$ 435.0	\$ 429.1
	Capital Outlay	\$ 931.0	\$ 906.0	\$ 853.3
	Total	\$1,350.0	\$1,341.0	\$1,282.4

* Note: All costs shown are in millions and include only the seismic retrofit program's portions of costs and expenditures.

Local Bridge Seismic Retrofit Program Status

The purpose of this report is to provide information on program delivery status of the Local Bridge Seismic Retrofit Program (LBSRP) for the 1,235 bridges which includes the 479 bridges adopted by the California Transportation Commission (Commission) on May 28, 2007.

The 479 bridges adopted by the Commission were identified to receive bond funds to match federal Highway Bridge Program (HBP) funds for their right of way and construction phases. Additional investigation by the Department revealed that eleven bridges either were not owned by local agencies, the seismic retrofit had already been completed, or the bridge had been demolished/removed. In addition, 42 Bay Area Rapid Transit (BART) bridges in this program will be de-federalized as requested by BART and will be a new project undertaken by BART alone. No local assistance federal or state funds will be needed for that work. Therefore this report will reflect the program delivery of 1,193 bridges under LBSRP which includes 426 bond bridges from here on.

The Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 provides \$125 million of State matching funds to complete the LBSRP with bond funds. The Bond program budget of \$125 million is to be allocated to provide the 11.47 percent required local match for right of way and construction phases of remaining seismic retrofit work on local bridges, ramps, and overpasses and

includes \$2.5 million set aside for bond administrative costs. An additional \$32.9 million state match through annual exchange of a portion of local share of funds received from federal HBP fund is also available to accommodate the current remaining required local match needs. The Commission has allocated \$13.5 million bond funds for FY 2007/08 and \$21 million bond funds for FY 2008/09. Consistent with the Local Bridge Seismic Retrofit Guidelines, the Department has exchanged \$24.3 million of local share of funds received through the federal HBP for state funds to accommodate local match needs for BART bridges. To date, \$14.7 million of seismic bond funds have been sub-allocated.

This report fulfills the Department's statutory reporting requirement outlined in Assembly Bill (AB) 144 (Chapter 71, Statutes of 2005), which amended Section 188.5 (g) of the Streets and Highways Code as follows:

“(1) Commencing on January 1, 2004, and quarterly thereafter until completion of all applicable projects, the Department shall provide quarterly seismic reports to the transportation committees of both houses of the Legislature and to the commission for other seismic retrofit programs.”

Local Bridge Seismic Retrofit Program Progress Report

The LBSRP is currently 61 percent complete. To date, 727 local bridges, out of total of 1,193 planned bridges, have been retrofitted under the LBSRP. Currently, there are 154 bridges under construction, 305 bridges under design, and 7 bridges in a pre-strategy phase.

LBSRP Milestones Achieved This Quarter

The status as of March 31, 2009 of local bridges by phases is as follows:

	2005	2006	2007	2008	2009
Complete	692	699	709	724	727
Construction	46	45	66	124	154
Design	291	295	333	349	305
Pre-Strategy	206	196	127	38	7
Total	1,235	1,235	1,235	1,235	*1,193

*42 BART bridges were removed from the retrofit list in 2009.

Milestones Achieved This Quarter for Bond Funded Bridges

The status as of March 31, 2009 of local bridges by phases is as follows:

	2005	2006	2007	2008	2009
Complete	0	0	0	4	7
Construction	0	0	15	99	107
Design	0	0	271	327	305
Pre-Strategy	0	0	193	38	7
Total	0	0	479	*468	**426

*Investigation by the Department removed eleven bridges. **42 BART bridges were removed from the retrofit list in 2009

LBSRP Program Budget and Expenditures

The estimated budget for the overall LBSRP is \$2,148.5 million. A total of \$833.2 million has been encumbered (spent) to date.

Funds (millions)	Spent	Plan	Total
State	\$71.5	\$32.9	\$104.4
Bond	\$14.7	\$107.8	\$122.5
Federal	\$747.0	\$1,174.6	\$1,921.6
Total	\$833.2	\$1,315.3	\$2,148.5

Funds Committed to Bond Projects (millions)

Component	Available	Allocated	Percent
LBSRP Bond	\$122.5	\$34.5	28%
State Funds	\$32.9	\$24.3	74%
LBSRP Bond Support	\$2.5		
Total	\$157.9	\$58.8	37%

Overall Program Delivery by Agency Group (Includes all the bridges in the LBSRP)

Bridges By Agency Group	Number Of Agencies	Pre Strategy	In Design	In Construction		Complete or No Retrofit		Total # Bridges	Percent Program
		Bond	Bond	Bond	Non- Bond	Bond	Non- Bond		
All Other Agencies	59	7	123	18	34	4	611	797	67%
Los Angeles Region (City and County)	2	0	27	37	13	0	109	186	16%
Department of Water Resources	1	0	24	0	0	1	0	25	2%
BART	1	0	131	52	0	2	0	185	15%
Total	63	7	305	107	47	7	720	1,193	100%

Projects in the pre-strategy and design phase will qualify for bond match when they advance to right of way and construction phase.